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THIRD GRADE LOW ACHIEVERS,
THEIR INITIAL READING BACKGROUND,
AND THEIR CREATIVE WRITING ABILITY

by

Julie S. Peltin

A RESEARCH PAPER
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION (READING SPECIALIST)
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This research paper has been
approved for the Graduate Committee
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Advisor

January 19, 1971
Date

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CHAPTER I
NATURE OF THE PROBLEM

Introduction

It is significant to quote the following:

Although elementary school graduates are supposed to have at least a fifth-grade reading ability, reports indicate that one third of the seventh grade population is below this level.¹

The writer has had opportunities to discuss this statement with many junior high school teachers from different areas, who constantly refer the problem to the primary school teachers, by citing the fact that these children "never really learned to read".

Studies have indicated that the greatest number of poor readers is found in the first grade, but that only a slightly smaller number is found in the second grade; 99 per cent of first grade failures, 90 per cent of second grade failures and 70 per cent of third grade failures are due to poor reading ability.²

Who or what is to blame? It is simple to point a finger at poorly prepared teachers, or at children who don't possess adequate readiness--physically, mentally, emotionally and socially. Could it be the English language itself that causes

¹Albert J. Mazurkiewicz, The Initial Teaching Alphabet in Reading Instruction (Bethlehem, Pennsylvania: Lehigh University and the Bethlehem Area School District, 1967), p.5.

²Ibid.

difficulties?

Chall asks, "What is the best way to teach a young child to read? No two people it seems, agree on an answer."¹

One wonders what medium and method will enable children to achieve success in learning to read and maintain this ability to read into adult life. What medium and method will solve the dilemma as posed in the first paragraph of the introduction?

Statement of the Problem

The purpose of this research was to determine which children in Grade Three in the Cedarburg Public Schools were low achievers in reading.

More specific objectives were to answer these questions:

Which group of low achievers (those who had i.t.a. or those who had T.O.) had better reading ability?

Which group of low achievers (those who had i.t.a. or those who had T.O.) had better creative writing ability?

Were there implications involved in future curriculum planning to meet the needs of the low achievers?

Scope of the Study

The study included the lower twenty-five per cent of

¹Jeanne Chall, Learning to Read, the Great Debate (St. Louis: Mc Graw Hill Book Company, 1967), p.1.

the third grade public school children of the City of Cedarburg, Wisconsin (1970-1971) as measured by the Stanford Achievement Test, Word Meaning and Paragraph Meaning sections.¹ Only those children who began first grade in the Cedarburg Public Schools, and continued in that same school system until the completion of the study were included.

In September, 1970 every third grader was given the same opportunity to write a creative story, using the identical picture stimulus. Only the stories written by the third graders in the lowest twenty five per cent as described in the above paragraph were rated. The stories were evaluated with parts of the "Carlson Analytical Originality Scale"² and "Supplementary Scoring Guide for the Evaluation of Originality and Interest"³.

Limitations

The study was limited to third graders in the Cedarburg Public Schools. Those third graders who did not begin

¹Truman Kelley, et al. Stanford Achievement Test, Primary II (New York: Harcourt, Brace and World, 1964).

²Ruth Carlson, "The Carlson Analytical Originality Scale," Sparkling Words (Berkeley, California: by the author, 1965), pp. 197-208.

³E. Paul Torrance, "Supplementary Scoring Guide for the Evaluation of Originality and Interest," in Scoring Manual for Evaluating Imaginative Stories, by Kaoru Yamamoto, (Minneapolis Bureau of Educational Research, 1961).

first grade in the Cedarburg Public Schools were not considered in the study. The third graders who were classified as special students (educables) by the County were not included in the study.

The test results quoted were from the Stanford Achievement Tests administered at the close of the school year in 1970, when the third graders under study had completed second grade, rather than at the beginning of their third year.

The creative writing samples were judged (according to a scale) only by the writer, rather than a panel of judges. Also, only one story was submitted by each child.

Significance of the Study

The Public School System of the City of Cedarburg during the 1970-1971 school year included, on the third grade level, eleven classes. Approximately forty per cent of these children, who began in Cedarburg, had i.t.a. as the initial medium of instruction and sixty per cent had T.O. as the initial teaching program. The writer had questioned the composition of the lowest quarter of readers of these third graders of 1970-1971.

Did those children who had i.t.a. in first grade compare more favorably in the lower quarter of readers in Grade Three to those children who had T.O. in first grade? Did those children in the i.t.a. group of low achievers write better creative stories than those of the T.O. group? Is the

Cedarburg School System through its use of i.t.a. achieving better results in vocabulary building, comprehension skills, and creative writing skills?

Definition of Terms

i.t.a.--This is the abbreviation for the Initial Teaching Alphabet, which is a forty-four character notational system, representing the forty sounds of English.¹

T.O.--This is the abbreviation for traditional orthography, which is the standard method of grouping the twenty-six letter alphabet to form words.²

Low achievers--The lowest quarter of readers as measured by the Stanford Achievement Test, Word Meaning and Paragraph Meaning Sections, is the group under consideration.

Creative Writing Scale--The utilization by the writer of parts of the "Carlson Analytical Originality Scale" and Torrance's "Supplementary Scoring Guide for the Evaluation of Originality and Interest" for the evaluation of creative writing stories.

Picture stimulus for creative writing stories--The one presented to all third graders was "Space Scene, the Struggle of the Martian and the Earthman", of the Peabody

¹Mazurkiewicz, The Initial Teaching Alphabet, p. 12.

²Ibid.

Language Development Kits.¹Summary

Thus, the problem has been stated with the various objectives of the study enumerated. The scope of the study has been discussed and the limitations presented. The significance of the study to the writer was discussed, and the important terms were defined. The next chapter will review the related literature.

¹"Story" Card 6. "Space Scene-The Struggle of the Martian and the Earthman," Peabody Language Development Kits, (Level#1), (Circle Pines, Minnesota: American Guidance Service, Inc., 1965).

CHAPTER II

REVIEW OF RELATED LITERATURE

Why Creative Writing?

The complex world of today demands resourceful, independent and imaginative adults. No longer can the average adult "exist" in a mediocre way in today's world.

The average worker finds himself in a technological society requiring continuous innovations and changes to keep pace with the fast moving world. Also, he finds himself with leisure time unknown before. Thus, he is being called upon to be creative and resourceful in his everyday life.

The professional or semi-professional must rely on his imagination and creative ability to forge ahead in his walk of life. The complex society requires a person who has insight. No longer can he be passive, sitting back without contributing his own creative abilities.

Where does the adult foster these necessary creative abilities demanded by the complex fast-moving society? One answer is the guided activity of creative writing in the classroom. This should begin early in the elementary school years. Many authorities share the belief of the importance of creative writing activities.

Torrance states that as research evidence continued to accumulate it became clear to him that creative thinking is important in mental health, educational achievement and vocational success. As he studied creative behavior among both children and adults, Torrance concluded that perhaps nothing could contribute more to the general welfare of the nation and the satisfaction and mental health of its people than a general raising of the level of creative behavior.¹

In the preface to They All Want to Write, Witty states:

Creative writing is a result of a number of related developments in modern education. One of these grows out of the widespread conviction that the primary aim of education is to assist in the development of well-oriented and reasonably adjusted young people. Some educational leaders believe that this goal can be attained only by incorporating creative activities in a broad educational program that seeks to offset some of the influences of a technological world.

Witty feels it is imperative that the schools assume a special responsibility for safeguarding the mental health of boys and girls. He feels that can best be accomplished by providing and maintaining an atmosphere for learning that fosters spontaneity and creativity and to offer children recognition, security and happiness.²

Witty believes that creative writing may serve a three-

¹E. Paul Torrance, Rewarding Creative Behavior (Englewood Cliffs: Prentice Hall, 1967), pp. 10-11.

²Paul Witty, Preface to They All Want to Write by Alvina T. Burrows, Doris C. Jackson, and Dorothy C. Saunders (New York: Rinehart and Winston, 1964), pp. V-VI.

fold function enabling each child to record his significant experiences, to share his activities and interests as well as to express himself freely, spontaneously and joyously.¹

Petty and Bowen state:

As a child, a person is often at his creative peak; he acts more instinctively, more intuitively, more spontaneously than he acts as an adult. Children much more than adults have the ability to perceive things each time anew.²

Tidyman feels the primary outcomes of creative writing are enriching experiences and enjoyment of literature. It is also felt that creative writing makes distinct contributions to language development.³

The main thread woven throughout Easy in English is that creative imagination is the chief tool of a closely knit world. Applegate believes that men cannot live well together in one world until they learn how to "walk in one another's shoes." She states that true empathy comes only to those who go and see or see and feel through the eyes of imagination.⁴

Applegate feels that without creative imagination to help us know the neighbor we cannot see, there can be no true

¹Ibid.

²Walter T. Petty and Mary E. Bowen, Slithery Snakes and Other Aids to Children's Writing (New York: Appleton-Century-Crofts, 1967), p. 2.

³W. P. Tidyman, Teaching The Language Arts (New York: McGraw Hill, 1959), p. 227.

⁴Maurae Applegate, Easy in English (Evanston: Row Peterson, 1960), pp. 16-19.

sharing. In this respect, she is referring to foreign aid by the United States to depressed areas throughout the world. She states that other than thinking, writing is the most imaginative of the arts of communication. Applegate believes that learning to write imaginatively will pay real dividends in this coming era of creative imagination from foreign policy to a thank you note.¹

Hildreth disagrees with a widely held view that children should not begin practicing writing until they have learned to read the words they will write and spell. Regardless of the methods used in reading instruction, any experience with writing benefits reading. Hildreth is referring here to the initial stages of learning to read. Hildreth summarizes advantages of early writing as an aid to reading, such as acquainting the beginner with the ABC's, reinforcing memory for the initial sounds, fixing words in the child's mind as he writes them, directional practice, and a motor response which aids memory of the letter forms and words.²

James A. Smith speaks of two kinds of writing--practical and creative. Practical writing is involved with formal matters of communication--invitations, formal business letters, notes of appreciation. Smith states:

¹Ibid.

²Gertrude Hildreth, "Early Writing As an Aid to Reading," Elementary English, XL (January, 1963), 15-18.

It is when we add a heart and a mind to writing that it becomes creative. When children begin to coin words, when they manipulate and explore them, when they begin to draw analogies, when they see relationships in their environment and draw comparisons in word experiences, when they paint word pictures, and become unique and novel in expressing themselves, we have creative writing.¹

Smith tells his readers that when an individual writes creatively, he is communicating on paper in his very best way. The ideas he writes are predominantly important. Smith warns that too much emphasis on spelling and grammar checks the flow of ideas or frustrates the writer so that he abandons writing as a communication form.²

Torrance also warns parents as well as teachers against placing too much emphasis on mechanics while children are learning to record their experiences. He feels that originality of children is impaired when they write something to be corrected rather than something to be simply read and enjoyed. Torrance believes children can write charmingly if encouraged to do so. They need guidance and suggestions.³

Petty and Bowen remind their readers that creative

¹James A. Smith, Creative Teaching of the Language Arts in the Elementary School (New York: Allyn and Bacon, 1967), p. 160.

²Ibid., 158.

³E. Paul Torrance, Education and the Creative Potential (Minneapolis: University of Minnesota Press, 1963), p. 54.

writing can cut across all ability levels in a classroom.¹
The activity can appeal to the proponents of individualized instruction. "Each child has some ability to express himself in words so while the class is engaged in basically the same thing, each child is working at his own exact level of ability".²

Burrows, Jackson and Saunders stress that writing is fun and when it is fun one writes to renew his own pleasure. No longer should there exist in the classroom the ordeal of "Composition time".³

In advocating the use of her scale, Carlson states that teachers in elementary and secondary school concerned with the mechanical elements of written expression may fail to recognize unusual qualities of thought, style, and form. If the teacher doesn't value novel ways of expression, the creative child may give up all novel modes of expression.⁴

Research in creative writing apparently is very sparse according to Wyatt. She investigated the relationship of writing ability to extensive reading. Wyatt asks if the writing abilities of children would be improved if they were given

¹Petty and Bowen, Slithery Snakes, p. 7.

²Ibid.

³Alvina Treut Burrows, Doris C. Jackson, and Dorothy O. Saunders, They All Want to Write (New York: Rinehart and Winston, 1964), p. 79.

⁴Ruth K. Carlson, "An Originality Story Scale," Elementary School Journal, LXC (December, 1961), 373.

more freedom to use imagination in their compositions.¹

It seems apparent that the elementary school teacher is faced with the great responsibility of providing the opportunity and the guidance for creative writing activities.

The writer has been told by various educators that through the medium of i.t.a. the child will develop better creative writing ability than if he were to learn to read through the medium of T.O. Subsequent chapters will discuss the writer's experiment on this topic.

i.t.a. in England

A name closely associated with i.t.a. is that of Pitman. In 1837 Sir Isaac Pitman opened a school in England. He had shorthand in the curriculum and at that time began to devise his own system. Pitman shorthand was adapted for use in several different languages. In 1842, he published his Phonographic Journal. Sir Isaac's brothers also lectured advocating a reform in English spelling which would result in a great shortening of time that children need in learning to read.²

In 1952, a bill was proposed in the House of Commons to determine a suitable system of simplified spelling and to use

¹Mita Wyatt, "Research in Creative Writing," Education-
al Leadership, XIX (February, 1962), 308.

²Maurice Harrison, The Story of the Initial Teaching
Alphabet (New York: Pitman Publishing Company, 1964),
pp. 29-31.

this system in the schools to improve the reading ability of children. The bill did not become a law, but it did receive much attention. The proposal was seconded by James Pitman, Sir Isaac's grandson.¹

In 1959, Sir James Pitman invented the Augmented Roman Alphabet. (now known as i.t.a.) Sir James made it clear that the alphabet was not a design for reforming spelling but a device for teaching reading to be used in the beginning stages of instruction only. Harrison states that Sir Isaac Pitman has been called the Father of English Phonetic Spelling. He feels it would be equally just to call Sir James, the Father of the Initial Teaching Medium.²

In 1961 sponsors, the University of London Institute of Education, and the National Foundation for Educational Research in England, began i.t.a. reading research in certain schools in England. Following that, several other i.t.a. programs were conducted in England and Scotland.³

After nine months' work, teachers had glowing reports. Harrison reports that spontaneous writing was discovered. He uses the word discover since creative writing was unknown with beginning readers before.⁴

¹John Downing, "How i.t.a. Began," Elementary English, XLIV (January, 1967), pp 41-46.

²Harrison, The Story, pp. 105-106.

³Downing, "How i.t.a. Began," pp 41-46.

⁴Harrison, The Story, p. 148.

During the 1961-1962 school year, both the experimental and control groups were volunteers. The first year there were a few hundred subjects. After four years, there were somewhat under 2000 subjects in each group. The groups were matched on age, sex, social class, non-verbal and verbal reasoning ability, urban and rural location, pupil-teacher ratio, physical environment of schools, and unlike the American studies, the same basal reader.¹

Downing reported after the first phase of research that pupils who had i.t.a. were able to read on the average of more than twice as many words of English as children who had T.O.²

In Staffordshire, England the effects of the initial teaching alphabet in free written compositions were studied in small subsamples representing both mediums. The written work of the children who had i.t.a. was evaluated at the beginning of the third school year and was found to be on the average 50 per cent longer and to use 45 per cent more different words than the compositions of their T.O. counterparts. After three years of school, the average pupil who had i.t.a. was five months ahead of his T.O. counterpart in reading ability.³

In comparison of failures, the incidence of reading failure in the i.t.a. group in the British experiment was

¹Downing, "How i.t.a. Began," pp. 41-46.

²Downing, "i.t.a. Results After 6 Years," Elementary School Journal, LXIX (February, 1969) pp. 242-249.

³Ibid.

reduced as compared to the T.O. group at the end of the third school year. After five years, this effect was still important.¹

Downing stresses that i.t.a. is not associated with one method of teaching reading. There are four methods. One method is the transliterated T.O. basal reader. The second is non-basal methods, taken over from T.O. practices such as individualized reading and the language experience approach. A third method is the i.t.a. creativity approach, using the Downing readers. The emphasis is on self-expression through creative writing. The fourth is a true phonics method, a more formal expository program. This would be represented by the series written by Mazurkiewicz and Tanyzer.²

In order to fully evaluate the writer's experiment, the i.t.a. program in the United States must be investigated.

i.t.a. in the United States

Mazurkiewicz reported that research in the use of a simplified spelling in reading instruction can be found as early as 1852. Dr. Thomas Hill used Sir Isaac Pitman's system with a marked result at that time.³

¹ John Downing, "Comparison of Failure in i.t.a. and T.O.," Reading Teacher, XXV (October, 1969), pp. 43-47.

² John Downing, "Alternative Teaching Methods in i.t.a.," Elementary English, XLV (December, 1968), pp. 942-951.

³ Albert Mazurkiewicz, The Initial Teaching Alphabet, p. 10.

Investigations in the St. Louis schools in 1867, sponsored by William T. Harris, utilized a systematic spelling system in learning to read. Excellent gains were reported. However, what really appeared to stir the imagination were early reports on the use of Pitman i.t.a. in British schools.¹

In 1963, i.t.a. research began in the United States in the city of Bethlehem, Pennsylvania. The original group, 1963-1964 population has been studied. By the fifth year of schooling, no significant difference was shown between the two groups for vocabulary, spelling and comprehension. The two groups referred to are, of course, the i.t.a. group and the T.O. group. The writing characteristics of the i.t.a. group were not compared to the T.O. group, but the i.t.a. group scored 98.9 accuracy in spelling.²

The 1964-1965 population was studied in its fourth year of school. A significant difference in vocabulary and comprehension was found in favor of the i.t.a. group and this refuted the fifth grade study. On a dictated spelling test the i.t.a. group scored significantly better.³

An examination of writing samples (using a picture stimulus) showed that the i.t.a. population wrote about 25 per cent

¹Ibid., pp. 10-11.

²Albert Mazurkiewicz, Rita Mcnerney, and Rebecca Stewart, "A Fifth Year Report of the Result of the i.t.a.-Language Arts 1967-1968 Study," (Bethlehem Area School District, Bethlehem, Pennsylvania, October, 1968)

³Ibid.

more words than the T.O. population but spelled no better.¹

The 1965-1966 population was studied in its third year of school. All of these children received instruction in i.t.a. in their first year, so no control group was available. The focus was on curriculum changes in writing characteristics. Improvement in language maturity was noted.²

It was reported that as the first i.t.a. experimental group entered sixth grade that the reading disabilities were reduced from nine per cent to four per cent for grades three to six.³

Peters and Gutkoska reported an experimental program which began in Harford, Maryland in September, 1966. Results showed that first graders who were enrolled in i.t.a. classes attained superior growth.⁴

Ohanlan criticizes findings from experimentation with i.t.a. as misleading. She recommends ways to counterbalance influences other than augmented orthography in pilot groups. For the T.O. groups, she recommends such measures as teaching the symbol sounds in T.O. in the same order as presented in i.t.a., utilizing writing as an aid to learning the symbol

¹Ibid.

²Ibid.

³Rebecca Stewart, "Reduced Incidence in the Need for Remedial Teaching After The Introduction of i.t.a. in Bethlehem," (Bethlehem, Pennsylvania, September, 1969).

⁴Howard B. Peters, and Joseph P. Gutkoska, "i.t.a. in Harford County, Bel Air, Md.," i/t/a bulletin (January, 1969).

words in T.O., providing as interesting language materials in T.O. as is provided in i.t.a. and the duplication of the same fervor, zest and conviction in the T.O. control groups that is evident in the i.t.a. groups.¹

One of the twenty-seven United States Office of Education First Grade Reading Studies was reported by Fry. Twenty-one first grades of mid New Jersey suburban school districts took part. Seven first grades used i.t.a., seven used T.O., and seven used the Diacritical Marking System. Stanford Achievement Tests results showed no significant differences between any of the three groups, at the end of Grades one, two or three. Writing samples collected favored i.t.a. children in the first and second grades, but not in the third grade. Interestingly enough, there was a greater variability between classroom means in which the same material was used than between means in classrooms where different materials were used.²

Nikas reported a small study similar to the one presented in the next chapter by the writer. Second and third graders at the Campus School of the State University College of New York at Oswego were involved in the study. Second graders who were taught through the medium of T.O. and second graders who were taught through the medium of i.t.a. did not differ

¹Vera Ochanlan, "Control Population in i.t.a. Experiment," Elementary English, LXII, (April, 1966), pp. 373-380.

²Edward Fry, "Comparison of Beginning Reading with i.t.a. and T.O. after 3 Years," Reading Teacher, XX (January, 1969), pp. 357-362.

significantly in spelling performance. Neither was a difference found between third grade groups in spelling achievement. There was no difference in the spontaneous writings between the two groups in second as well as third grade.¹

Summary

The necessity for creative writing in the elementary school curriculum was discussed. The use of i.t.a. in England as well as i.t.a. in the United States was explained. The next chapter will present the procedure for the experiment conducted by the writer.

¹George Nikas, "Initial Teaching Alphabet and Traditional Orthography-Their Impact on Spelling and Reading," Elementary School Journal, LXX (March, 1970), pp. 321-330.

CHAPTER III

THE PROCEDURE

Population

This study involved eleven classes of third graders in the Cedarburg Public Schools during the 1970-1971 school year. A total of four different elementary schools was visited.

Each reading record was studied to determine, first, if each child began in the Cedarburg Public Schools in the first grade in September, 1968, and continued in that same school system through the time of the completion of the study in 1970. The reading record was also inspected to determine if the child had i.t.a. or T.O. as beginning reading instruction. During the 1968-1969 school year, approximately forty per cent of the children were taught to read using i.t.a. and sixty per cent used T.O.

Testing Program

In May, 1970, every second grader was given the Stanford Achievement Test, Primary II Battery, form Y. Various scores were obtained. Of specific interest were Word Meaning and Paragraph Meaning Scores.

Also, in May, 1970, one third grade was given an opportunity to write creative stories, using the picture stimulus,

"Space Scene-The Struggle of the Martian and the Earthman" of the Peabody Language Development Kits. The writer evaluated each story using a creative writing scale which will be explained fully in a later section of this chapter. Deficiencies in the scale as it pertained to this group were found and the scale was slightly modified. The writer called this experience with the one third grade class "the pilot study".

Using the same picture stimulus, "Space Scene-the Struggle of the Martian and the Earthman", every third grader was given the same opportunity to write a creative story. The writer visited every third grade classroom in the Cedarburg Public Schools from September 25, 1970 to October 8, 1970.

Identification and Grouping of Low Achievers

Using the results of the Stanford Achievement Test, administered at the close of the academic year, 1970, every child was given a single reading score. It was obtained by averaging the word meaning and paragraph meaning score.

Inspection of all the reading records had eliminated those children from the tabulation who were not students in the Cedarburg Public Schools during the entire 1968-1969 and 1969-1970 school years.

A simple frequency table was devised. The two parallel columns were headed i.t.a. and T.O. respectively. After every child's single reading score was recorded, the lowest quarter of the i.t.a. group and the T.O. group was determined.

According to Harris, the term reading retardation is relative. A low achiever in a high socio-economic area may have a radically different score from a low achiever in a low socio-economic area. The average reader in a "Good Area" may be two years above the national norm. Harris notes that children judge their success according to how they are doing as compared to the rest of the group, not according to the national norm.¹

In recognition of this concept, no predetermined score was considered as the criterion for low achievement. What was predetermined was the use of the lower quarter of the Third Grade for low achievement.

Creative Writing Study

Sister Marjorie Cutcher's study offers excellent insight into the writing of creative stories.² Although Sister Marjorie scrutinized five creative writing scales, her final choice of a scale was a combination of the Carlson Analytical Scale for Measuring the Originality of Children's Stories³

¹Dr. Albert Harris, "The Classroom Teacher Copes With Remedial Work". A lecture delivered at the Cardinal Stritch College, Milwaukee, Wisconsin, July 6, 1970.

²Sister Marjorie Cutcher, "Comparative Effectiveness of Literary Selections and of Pictorial Illustrations in Stimulating Creative Writing Among Second Graders." Unpublished Master's thesis, Cardinal Stritch College, Milwaukee, Wisconsin, 1968.

³Carlson, "The Carlson Analytical Originality Scale".

and Torrance's Supplementary Scoring Guide for the Evaluation of Originality and Interest in Creative Writing.¹

The writer used the combination of the above two scales to appraise some twenty-five stories written by a third grade in May, 1970. This was referred to earlier as the "pilot study".

Sister Marjorie's study determined that better results were obtained from children's viewing a picture before writing a story, rather than the children listening to a story. (picture stimulus vs. story stimulus). Consequently, the writer used an appealing, colorful picture from the Peabody Language Kit as the picture stimulus. Sister Marjorie's study was similar to the present research in that the two studies dealt with primary grade children from similar socio-economic backgrounds.

The suggestion of a discussion period after viewing the picture proved most helpful, as well as the discussion questions, to provoke thinking in general. The suggestion of providing the correct spelling of any word asked by a student also proved most helpful. The creative writing scale does not consider correct spelling as any indication of writing ability.

Sister Marjorie used ten classifications to rate each child's creative writing ability. Each classification or item was scored 0, 1, 2 or the maximum, which was 3 points. Thus, the highest score a child could attain on the creative writing

¹Torrance, "Supplementary Scoring Guide".

scale was 30 points.

Sister Marjorie used the following ten classifications:

1. Title
2. Unusual beginning
3. Dialogue
4. Invented Words or Names
5. Personal Outlook
6. Quantitative Thinking
7. Inclusion of the Reader
8. Humor
9. Novelty of Ideas
10. Original Solution or Ending

The writer deviated slightly from Sister Marjorie's ten item scale. The writer did not use the section entitled "Invented Words, Names, Etc." as described by Torrance.¹ Instead, the writer used the Carlson classification entitled "Novelty of Names".² Also, the section entitled "Humor" by Torrance was replaced by the Carlson Scale classification entitled "Humor". The writer felt the Carlson Scale was easier to apply than the Torrance Guide. The writer followed Sister Marjorie's use of a three point scale which was discussed above.

Consequently, the writer used the following ten classifications:

1. Title
2. Unusual Beginning
3. Dialogue
4. Novelty of Names
5. Personal Outlook
6. Quantitative Thinking
7. Inclusion of the Reader
8. Humor
9. Novelty of Ideas
10. Original Solution or Ending

¹Ibid.

²Carlson, "The Carlson Analytical Originality Scale".

Scoring Samples

Following the determination of those students in the lowest quarter of the i.t.a. group and of the T.O. group, the writer compiled a single combined alphabetical list of names of children in the lowest quarter. The resulting alphabetical list of names of children in the lowest quarter of the third grade (eliminating those children who did not begin first grade in the Cedarburg System) provided no clue to the writer as to the initial reading background of any child.

As described previously, every child in Grade Three was given the opportunity to write a story under very similar conditions. The writer removed the stories of all the low achievers from the entire group of stories, and arranged the stories alphabetically, by last names. Consequently, the writer evaluated the one story of each low achiever without knowledge of the child's initial reading background. As discussed in the preceding section, the writer evaluated each story using the ten item classification.

Statistical Procedures

Statistical procedures were used to determine the degree of significance between the means of the i.t.a. group and the T.O. group. A special formula was applied (for small samples

of unequal number.¹⁾

The t ratio was employed to determine possible significant differences between the reading average of the i.t.a. group and the T.O. group. The t ratio was also employed to determine possible significant differences between the creative writing ability of the i.t.a. group and the T.O. group.

Summary

Thus, the population of the study has been described. The testing program utilized by the writer in order to identify and group the low achievers was discussed. The use of a creative writing scale enabled the writer to judge each low achiever's creative writing ability. Statistical procedures were followed to note any significant differences between the two groups. The next chapter will compare the findings of the i.t.a. and the T.O. groups.

¹Janet T. Spence, et al., Elementary Statistics (New York: Appleton-Century-Crofts, 1968), p. 108.

CHAPTER IV

INTERPRETATION OF DATA

Comparison of the Reading Ability of the Two Groups

As stated in the preceding chapter, each reading record was studied to determine, first, if each child began in the Cedarburg Public Schools in the first grade in September, 1968, and continued in that same school system through the time of the completion of the study in 1970. As a result, a total of 202 third grade pupils were included in the study.

Approximately, 40 per cent of the first grade of 1968-1969 were placed in classes using i.t.a. and 60 per cent were placed in classes using T.O. The reading record of each third grader was also studied to determine which type of class, i.t.a. or T.O., the child had had in first grade. Of the 202 third grade pupils under study, 42 per cent used i.t.a. and 58 per cent used T.O. Thus, 85 pupils comprised what is referred to as the entire i.t.a. group and 117 pupils comprised what is referred to as the entire T.O. group.

A study of the Stanford Achievement Test, administered at the close of the school year, 1970, provided a single reading score for each child. (by averaging the Word Meaning and Paragraph Meaning Scores)

The lowest quarter of the entire i.t.a. group and the

lowest quarter of the entire T.O. group was then determined. Consequently, 21 children of the i.t.a. group were included in the study. The 21 i.t.a. children scored at a reading grade level of 2.5 or below.

In actuality, 29 children of the T.O. group should have been included in the lowest quarter of the group. However, 28 children scored at grade level 2.5 or below, and 36 children scored at 2.6 or below. Consequently, 2.5 was designated as highest score considered, since it more accurately depicted the quarter, and 28 children, thus became the total number of the T.O. lowest quarter.

Data comparing the reading ability of both groups are presented in Table 1.

TABLE 1

1970 STANFORD ACHIEVEMENT TEST
LOWEST QUARTER OF GRADE THREE
READING SCORE

i.t.a.	n=21	T.O.	n=28	t	Confidence
M	S.D.	M	S.D.	ratio	Level
1.95	.45	2.03	.28	1.11	Insignificant

A mean difference of .08 between the averages of the two groups favored the T.O. group. The difference was non-significant with a t-ratio of 1.11. A t-ratio of 2.011 was required to be significant at the five per cent level, and

2.684 was required to be significant at the one per cent level.

Comparison of the Creative Writing Ability of the Two Groups

Every third grade child was given the same opportunity to write a story. The writer judged the story of each low achiever without any knowledge of the child's initial reading experience.

Every story was judged using a ten-item scale. The maximum score a child could attain was three points per item, or a score of 30 points. Data comparing the creative writing ability of the two groups are presented in Table 2.

TABLE 2

CREATIVE WRITING ABILITY
LOWEST QUARTER OF GRADE THREE

i.t.a. n=21		T.O. n=28		t ratio	Confidence Level
M	S.D.	M	S.D.		
6.33	2.55	5.96	1.94	.54	Insignificant

The 21 i.t.a. pupils scored a total of 133 points for an average score of 6.33 points per story. The 28 T.O. pupils scored a total of 167 points for an average of 5.96 points per story. A mean difference of .37 between the averages of the two groups favored the i.t.a. group. The difference was non-significant with a t-ratio of .54. A t-ratio of 2.011 was

required to be significant at the five per cent level, and 2.684 was required to be significant at the one per cent level.

Further Analysis of the Creative Writing Scores

Further inspection of each item or classification of the creative writing scale yielded pertinent information. Comparative data regarding the pupils' creative writing ability are presented in Table 3.

TABLE 3

AVERAGE SCORES OF THE TEN CLASSIFICATIONS FOR THE TWO GROUPS

Classifications of Scale	Average	Score
	i.t.a.	T.O.
1. Title	1.24	1.18
2. Unusual Beginning	1.00	.93
3. Dialogue	.24	.11
4. Novelty of Names	1.57	1.46
5. Personal Outlook	.14	.21
6. Quantitative Thinking	.38	.57
7. Inclusion of the Reader	.00	.04
8. Humor	.14	.14
9. Novelty of Ideas	.95	.68
10. Original Solution of Ending	.67	.64
Total	6.33	5.96

Title.--A great variance of scores for both groups was apparent in the use of a story title. (Item 1.) In the i.t.a. group, six children wrote their stories offering no title (zero points), six children used a general title (one

point), seven children wrote a more specific title (two points) and two children offered an unusual story title receiving the maximum of three points.

In the T.O. group, eleven children wrote their stories offering no title, three children used a general title, twelve children wrote a more specific title, and two children offered an unusual story title receiving the maximum of three points.

Examples of an unusual story title would be "The Moon Goons" and "The Weird Martian".

Unusual Beginning.--A rare beginning to the story occurred in neither group so no one earned the maximum score of three points in Item 2. Most of the children had a fairly usual type of beginning to the story, scoring one point. Responses of an ordinary traditional beginning (zero points) were found in both groups as well as an unusual beginning. (two points)

Dialogue.--With two exceptions in each group, no dialogue or conversation was found in the stories. (Item 3) Consequently, most pupils received zero points in this category.

Novelty of Names.--Nouns used in a general nature (one point) as well as names given, but names appearing rather frequently, (two points) were found in stories by both groups. This classification was the fourth category under consideration.

Personal Outlook.--The personal element, where the author involves himself in the account, (Item 5) was not present, for the most part, in the stories. Thus, most children in the two groups received a score of zero.

Quantitative Thinking.--The majority of children in both groups used no numbers in their stories (Item 6) and thus, received a score of zero. Some children in both groups earned one point for the ordinary use of numbers, and some earned two points for the use of numbers to further the story.

Inclusion of the Reader.--With one exception, no child gave any attention to the reader, and consequently, scored zero for Item 7.

Humor.--Little humor was evident in the stories by either group, so most children received zero points for this classification. (Item 8)

Novelty of Ideas.--A variance of scores was noted in Item 9. Some children offered no novel ideas, and received zero points. Many used some novel ideas, and received one point. However, only pupils in the i.t.a. group presented some fairly unusual ideas, and received two points.

Original Solution or Ending.--Again, a variance among the scores was noted in Item 10. There were children in both groups whose stories had no real ending and received zero points. The majority in both groups had fairly usual endings and received one point.

A final table is presented comparing the frequency of the total scores of each group.

TABLE 4

FREQUENCY OF TOTAL SCORE

Total Score	Number of Pupils	
	i.t.a.	T.O.
0	0	0
1	1	0
2	0	1
3	1	2
4	2	4
5	4	4
6	5	6
7	3	5
8	1	3
9	1	2
10	1	1
11	1	0
12	1	0
Total	21	28

It is seen that the i.t.a. group's scores range from one to a maximum of twelve points, whereas the T.O. group had scores that ranged from two points to ten points. The mode for each group is equal to six points.

Summary

The difference between the i.t.a. and T.O. groups in reading ability was determined to be non-significant. The difference in creative writing ability between the two groups was also determined to be non-significant. A further analysis of the creative writing scores was also undertaken in this chapter. A study was made of each of the ten classifications

of the creative writing scale, comparing the stories of the i.t.a. group with the stories of the T.O. group.

The next chapter will offer a summary and conclusions, as well as suggestions for further research.

CHAPTER V

SUMMARY

Conclusions

What medium is the best available to teach children to read? Is the medium of i.t.a. superior to traditional orthography? After reviewing the related literature, it is apparent that the controversy persists.

The writer described studies in which the i.ta. groups were superior in reading ability to their T.O. counterparts. This superiority persisted after one, two, three or more years of schooling. In contrast, other studies that were described showed no difference in reading ability after one, two, three or more years of schooling.

Likewise, experiments were described in which the children who were taught reading through the medium of i.t.a. were superior in creative writing ability to their T.O. counterparts. Other studies refuted this claim and showed no difference in writing ability between the two groups.

One fact was quite apparent and important. No study showed that the children who learned to read through the medium of i.t.a. were less able readers after one, two, three or more years of schooling. No i.t.a. group had inferior creative writing ability compared to its T.O. counterpart.

With this background in mind, the research conducted by the writer was impartially executed and reported.

Since 1966 when the first i.t.a. class was instituted in the Cedarburg Public Schools, up to the present time (1970) when every first grade teacher uses i.t.a. as the initial medium of instruction, reports of parents, teachers, children and administrators have been enthusiastically and overwhelmingly in support of i.t.a.

The present research was concerned with the low achievers in the third grade in the Cedarburg Public Schools. No significant difference in reading ability was found in the third grade between the low achievers who had i.t.a. as the initial medium of instruction and the low achievers who had T.O. as the initial medium of instruction. Each child in the respective group of low achievers scored at grade level of 2.5 or below on a reading achievement test.

There was no significant difference in creative writing ability between the i.t.a. group of low achievers and the T.O. group of low achievers.

Consequently, in the opinion of the writer, the Public Schools in the City of Cedarburg are meeting the needs of the low achievers through the use of i.t.a. as the initial medium of instruction. The research did not prove in any way that i.t.a. had a negative effect on the low achievers. The enthusiasm and support by all involved in the i.t.a. program was evident. The financial investment of the i.t.a. program

has already taken place. The research did not indicate the necessity of a change from the initial teaching alphabet to traditional orthography.

Suggestions for Further Research

Immediately, the writer is concerned with the implications and ramifications of this research. Only one segment of the Cedarburg Public School population was studied. How does the average third grade child who had i.t.a. as the initial medium of instruction compare in reading ability to his T.O. counterpart? How does the superior i.t.a. student compare in reading ability to his T.O. counterpart? How does the creative writing ability of the average and superior student who had T.O. compare to the average and superior student who had i.t.a.?

The debate concerning materials for learning to read will persist. It is incumbent upon educators and researchers to constantly innovate, investigate, and evaluate present mediums and methods in order to offer the best in reading instruction to the children of today and tomorrow.

BIBLIOGRAPHY

BOOKS

- Applegate, Mauree. Easy in English. Evanston, Illinois: Row Peterson, 1960.
- Bond, Guy L., and Tinker, Miles A. Reading Difficulties, Their Diagnosis and Correction. New York: Appleton-Centry-Crofts, Inc., 1957.
- Burrows, Alvina Treut; Jackson, Doris; and Saunders, Dorothy C. They All Want to Write. New York: Rinehart and Winston, 1964.
- Carlson, Ruth. Sparkling Words. Berkeley, California: Ruth Carlson, 1965.
- Chall, Jeanne. Learning to Read, the Great Debate. New York: McGraw-Hill, 1967.
- Harrison, Maurice. The Story of the Initial Teaching Alphabet. New York: Pitman Publishing Company, 1964.
- Howes, Virgil M., and Darrow, Helen F. Reading and the Elementary School Child. New York: Macmillan, 1968.
- Mazurkiewicz, Albert. The Initial Teaching Alphabet in Reading Instruction. Bethlehem, Pennsylvania: Lehigh University and the Bethlehem Area School District, 1967.
- Petty, Walter T., and Bowen, Mary E. Slithery Snakes and Other Aids to Children's Writing. New York: Appleton-Century-Crofts, 1967.
- Smith, James A. Creative Teaching of the Language Arts in the Elementary School. Boston: Allyn and Bacon, 1967.
- Spence, Janet T., et al. Elementary Statistics. New York: Appleton-Century-Crofts, 1968.
- Taylor, Calvin W., and Williams, Frank E. Instructional Media and Creativity. New York: John Wiley and Sons, Inc., 1966.

Tidyman, Willard. Teaching the Language Arts. New York: Mc Graw Hill, 1959.

Torrance, E. Paul. Education and the Creative Potential. Minneapolis: University of Minnesota Press, 1963.

_____. Rewarding Creative Behavior. Englewood Cliffs, New Jersey: Prentice, Hall, 1965.

ARTICLES AND PERIODICALS

Bond, Guy, L. "First Grade Reading Studies-An Overview." Elementary English, XLIII (May, 1966), 464-472.

Carlson, Ruth K. "An Originality Story Scale." Elementary School Journal, LXV (April, 1965), 366-374.

_____. "Seventeen Qualities of Creative Writing." Elementary English, XXXVIII (December, 1961), 576-579.

Downing, John. "Alternative Teaching Methods in i.t.a." Elementary English, XLV (December, 1968), 942-951.

_____. "British i.t.a. Research." The Reading Teacher, XXI, 640-646.

_____. "Comparison of Failure in i.t.a. and T.O." The Reading Teacher, XXIII, (October, 1969), 43-47.

_____. "How i.t.a. Began." Elementary English, XLIV (January, 1967), 40-46.

_____. "i.t.a. Results After 6 Years." Elementary School Journal, LXIX (February, 1969), 242-249.

Fry, E. "Comparison of Beginning Reading With i.t.a. and T.O. After 3 Years." The Reading Teacher, XXII (January, 1969), 357-362.

Hildreth, Gertrude. "Early Writing As an Aid to Reading." Elementary English, XL (January, 1963), 15-20.

Mazurkiewicz, Albert. "Comparison i.t.a. to T.O. Reading Achievement When Methodology Is Controlled Extended into Second Grade." The Reading Teacher, XX (May, 1967), 726-729.

Nikas, George. "Initial Teaching Alphabet and Traditional Orthography-Their Impact on Spelling and Reading." Elementary School Journal, LXX (March, 1970), 321-330.

Ohanlan, Vera. "Control Population in I.T.A. Experiment." Elementary English, LXIII (April, 1966), 373-380.

Wyatt, Nita. "Research in Creative Writing." Educational Leadership, XIX (February, 1962), 307-310.

Yamamoto, Kaoru. "Creative Writing and School Achievement." School and Society, XCI (October, 1963), 307-308.

UNPUBLISHED MATERIALS

Bethlehem Area School District. Abbreviated Third Annual Report on the Lehigh University-Bethlehem Area School System Demonstration and Evaluation Project: "Use of the Initial Teaching Alphabet in Reading Instruction." Bethlehem, Pennsylvania, 1966.

Cutcher, Sister Marjorie. "Comparative Effectiveness of Literary Selections and of Pictorial Illustrations in Stimulating Creative Writing Among Second Grades." Unpublished Master's thesis, the Cardinal Stritch College, Milwaukee, Wisconsin, 1968.

Harris, Albert. "The Classroom Teacher Copes with Remedial Work." A Lecture delivered at the Cardinal Stritch College, Milwaukee, Wisconsin, July 6, 1970.

Mazurkiewicz, Albert; Mc Nerney, Rita; Stewart, Rebecca. "A Fifth Year Report of the Result of the I.T.A.-Language Arts 1967-1968 Study." Bethlehem Area School District, Bethlehem, Pennsylvania, October, 1968.

Mazurkiewicz, Albert. "Fourth Year Longitudinal Study-i.t.a. Versus T.O." IMPACT. A Newsletter from the i.t.a Demonstration and Language Arts Development Center. Volume I, No. 2, Spring, 1967, Bethlehem, Pennsylvania.

Peters, Howard B., and Gutkoska, Joseph P. "i.t.a. in Harford County, Bel Air, Md." i/t/a bulletin. Initial Teaching Alphabet Publications, Inc. January, 1969.

Stewart, Rebecca. "Reduced Incidence in the Need for Remedial Teaching after the Introduction of i.t.a. in Bethlehem." Bethlehem, Pennsylvania, September, 1969.

MISCELLANEOUS

Kelley, Truman., et al. Stanford Achievement Test, Primary
II. New York: Harcourt, Brace and World, 1964.

"Story" Card 6. "Space Scene-The Struggle of the Martian
and the Earthman." Peabody Language Development Kits.
(Level #1), Circle Pines, Minnesota: American Guidance
Service, Inc., 1965.

Torrance, E. Paul. "Supplementary Scoring Guide for the
Evaluation of Originality and Interest." in Scoring
Manual for Evaluation Imaginative Stories. By Kaoru
Yamamoto, Minneapolis Bureau of Educational Research,
1961.

APPENDIX I
INDIVIDUAL CREATIVE WRITING SCORES
OF THE i.t.a. LOW ACHIEVERS

Student	Reading Score	Creative Writing Classifications										Total Points
		1	2	3	4	5	6	7	8	9	10	
1	2.5	3	2	0	2	0	0	0	0	1	0	8
2	2.5	1	0	0	1	0	0	0	0	1	1	4
3	2.5	3	1	2	2	0	0	0	0	1	1	10
4	2.5	0	0	0	0	0	0	0	0	1	0	1
5	2.4	2	1	0	2	0	1	0	0	0	0	6
6	2.3	1	1	0	2	0	2	0	2	2	2	12
7	2.2	0	1	0	1	0	1	0	0	2	0	5
8	2.2	2	1	0	1	0	0	0	0	1	0	5
9	2.1	1	2	0	3	1	1	0	0	2	1	11
10	2.0	2	1	0	2	0	0	0	0	0	1	6
11	1.9	2	1	0	1	1	0	0	0	1	1	7
12	1.9	2	1	0	2	0	0	0	0	1	1	7
13	1.8	0	0	3	1	0	1	0	0	0	0	5
14	1.8	2	2	0	3	0	0	0	0	2	0	9
15	1.8	1	1	0	1	0	0	0	0	1	2	6
16	1.7	0	1	0	2	0	1	0	0	0	1	5
17	1.7	1	1	0	1	0	0	0	0	0	0	3
18	1.6	2	1	0	2	0	0	0	0	0	1	6
19	1.4	1	1	0	1	1	0	0	1	1	1	7
20	1.4	0	1	0	1	0	0	0	0	1	1	4
21	0.7	0	1	0	2	0	1	0	0	2	0	6

APPENDIX II
INDIVIDUAL CREATIVE WRITING SCORES
OF THE T.O. LOW ACHIEVERS

Student	Reading Score	Creative Writing Classifications										Total Points
		1	2	3	4	5	6	7	8	9	10	
1	2.5	2	2	0	2	0	0	0	0	1	1	8
2	2.5	2	0	0	2	0	1	0	0	0	0	5
3	2.4	3	0	1	2	0	1	0	1	1	1	10
4	2.4	2	1	0	1	1	0	0	0	1	1	7
5	2.4	0	0	0	2	2	0	0	1	0	0	5
6	2.3	2	1	0	2	0	0	0	0	1	1	7
7	2.3	2	1	0	1	0	2	0	0	1	0	7
8	2.2	0	1	0	1	1	1	0	0	1	1	6
9	2.2	0	0	0	1	0	0	0	0	1	0	2
10	2.1	2	1	0	1	0	2	0	1	1	1	9
11	2.1	1	1	0	1	0	0	0	0	0	1	4
12	2.1	2	1	0	1	0	0	1	0	0	0	5
13	2.1	0	1	0	1	1	1	0	0	1	1	6
14	2.1	0	2	0	1	0	2	0	0	1	0	6
15	2.0	0	1	0	1	0	0	0	0	1	1	4
16	2.0	1	1	2	2	0	1	0	0	0	1	8
17	2.0	2	2	0	2	0	0	0	0	0	1	7
18	1.9	2	1	0	2	1	1	0	0	1	1	9
19	1.9	2	1	0	1	0	1	0	0	0	1	6
20	1.9	0	2	0	2	0	0	0	0	1	1	6

APPENDIX II--Continued

Student	Reading Score	Creative Writing Classifications										Total Points
		1	2	3	4	5	6	7	8	9	10	
21	1.9	0	0	0	2	0	0	0	0	1	0	3
22	1.8	3	1	0	2	0	0	0	0	1	0	7
23	1.8	2	1	0	1	0	0	0	0	0	1	5
24	1.7	0	2	0	0	0	2	0	0	0	0	4
25	1.7	0	0	0	2	0	0	0	1	1	0	4
26	1.6	1	1	0	2	0	1	0	0	1	0	6
27	1.5	0	0	0	1	0	0	0	0	1	1	3
28	1.5	2	1	0	2	0	0	0	0	1	2	8